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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,191	09/26/2003	Jung-bum Suh	1293.1858	5225
21171 7590 03/27/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER PATEL, GAUTAM	
			ART UNIT	PAPER NUMBER
			2627	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/27/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/670,191

Applicant(s)

SUH, JUNG-BUM

Examiner

Gautam R. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Claims 1-10, 12 and 14-20 are pending for the examination.

### RCE STATUS

2. The request filed on 2/2/07 for Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application is acceptable and a RCE has been established. An action on the RCE follows.

### Claim Rejections - 35 U.S.C. § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10, 12 and 14-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Tanaka et al., US. patent 6,388,963 (hereafter Tanaka).

As to claim 1, Tanaka discloses the invention as claimed, a method of controlling tracking [see Figs. 2, 11, 13 & 17-18] including monitoring the tracking actuator and returning the objective lens, comprising the steps of:

monitoring whether the tracking actuator [fig. 13, unit 68] deviates from a dynamic range based on a signal controlling the feed motor when tracking is performed, wherein the monitoring comprises comparing the signal controlling the feed motor with a predetermined reference value, and determining that the tracking actuator deviates from the dynamic range when the signal controlling the feed motor is greater than the predetermined reference value for a predetermined time [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43]; and

returning the objective lens [fig. 2, unit 65] connected to the tracking actuator to a neutral point directly in response to the determining that the tracking actuator deviates from the dynamic range [col. 20, line 48 to col. 21, line 4; & col. 4, line 63 to col. 5, line 25].

4. The aforementioned claim 2, recites the following steps, inter alia, disclosed in Tanaka:

the returning of the objective lens is performed by turning off a tracking servo of the disc drive [col. 20, line 48 to col. 21, line 4; & col. 4, line 63 to col. 5, line 25 and figs. 13-15].

5. The aforementioned claim 3, recites the following steps, inter alia, disclosed in Tanaka:

the monitoring comprises comparing the signal controlling the feed motor with a predetermined reference value [col. 16, lines 64-65].

6. The aforementioned claim 4, recites the following steps, inter alia, disclosed in Tanaka:

the monitoring further comprises monitoring whether the signal controlling the feed motor is greater than the predetermined reference value for a predetermined time [200  $\mu$ sec], when the signal controlling the feed motor is greater than the predetermined reference value [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43].

7. The aforementioned claim 5, recites the following steps, inter alia, disclosed in Tanaka:

the predetermined reference value is set based on the dynamic range and a movable range of the tracking actuator [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43].

8. The aforementioned claim 6, recites the following steps, inter alia, disclosed in Tanaka:

the predetermined reference value is set at a value approaching a limit of the dynamic range of the tracking actuator [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43].

NOTE: erroneous continuation such that lens is scratched is by definition the extreme limit.

9. As to claims 7-8, they are claims corresponding to claims 5-6 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 5-6 respectively, *supra*.

10. The aforementioned claim 9, recites the following steps, inter alia, disclosed in Tanaka:

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an optical pickup [fig. 13, units 61, 64, 67, 68 etc.] outputting a radio frequency signal from a signal picked up from a disc loaded in the disc drive when the disc drive is driven;

a radio frequency amplifier [fig. 13, unit 85] outputting a tracking error signal detected from the radio frequency signal;

a servo control unit [fig. 16 unit 8B] outputting a control signal for driving the tracking actuator and the feed motor based on the tracking error signal output from the radio frequency amplifier; and

a control unit [fig. 16, unit 8B and 97] monitoring the control signal for driving the feed motor output from the servo control unit, wherein the control unit compares the control signal for driving the feed motor with a predetermined reference value, and when the control signal is greater than the predetermined reference value for predetermined time, determines that the tracking actuator deviates from the dynamic range and directly in response to determining that the tracking actuator deviates from a dynamic range, controls the servo control unit to return the objective lens connected to the tracking actuator to a reference position [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43].

11. The aforementioned claim 10, recites the following steps, inter alia, disclosed in Tanaka:

the control unit controls the servo control unit to turn a tracking servo off to return the objective lens to the reference position, preventing damage [col. 17, lines 3-6] to the tracking actuator and the objective lens when an over-current flows through tracking coils due to the tracking actuator deviating from the dynamic range [col. 16, line 59 to col. 17, line 6; and col. 20, lines 33-43].

12. As to claims 12 and 14-15, they are apparatus claims corresponding to claims 5 & 5-6 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 5 & 5-6 respectively, supra.

13. As to claim 16, it is rejected for the similar reasons set forth in the rejection of claim 9, supra.

14. The aforementioned claim 17, recites the following steps, inter alia, disclosed in Tanaka:

the disc is a compact disc (CD) or a digital versatile disc (DVD) [col. 1, lines 13-15].

15. The aforementioned claim 18, recites the following steps, inter alia, disclosed in Tanaka:  
a tracking actuator driver that drives the tracking actuator using the control signal output from the servo control unit to move the objective lens in a tracking or radial direction of the disc [col. 6, lines 22-47 & col. 7, lines 5-33].

16. The aforementioned claim 19, recites the following steps, inter alia, disclosed in Tanaka:  
an equalizer [fig. 11, unit 230] receiving the control signal output from the servo control unit and outputting a low frequency band signal, the low frequency band signal representing an amount of deviation of the objective lens from a neutral point within the dynamic range [col. 15, lines 57-60 and col. 16, lines 27-58].

17. The aforementioned claim 20, recites the following steps, inter alia, disclosed in Tanaka:  
a feed motor driver [inherently present when feed motor is being driven] driving the feed motor to move the tracking actuator using the low frequency band signal output from the equalizer, a moving distance of the feed motor being a distance the tracking actuator is moved to return the objective lens to the neutral point [col. 20, line 48 to col. 21, line 4; & col. 4, line 63 to col. 5, line 25].

18. Applicant's arguments with respect to claims 1-10, 12 and 14-20 have been considered but are moot in view of the new grounds of rejection.

#### **Other prior art cited**

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Pang et al. (US. Patent 6597528).
- b) Yoshio et al. (US. patent 5341353).
- c) Smith (US. patent 6600622)
- d) Suzuki (US. patent 5631886).
- e) Turner et al. (US. patent 7095685)

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**Contact information**

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is 571-272-7625. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2600) where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Dwayne Bost, who can be reached on (571) 272-7023.

Any inquiry of a general nature or relating to the status of this application should be directed to the Electronic Business Center whose telephone number is 866-217-9197 or the USPTO contact Center telephone number is (800) PTO-9199.



**GAUTAM R. PATEL  
PRIMARY PATENT EXAMINER**

Gautam R. Patel  
Primary Examiner  
Group Art Unit 2627

March 24, 2007